

REMARKS

Claims 1, 2, 4 and 5 remain in the case.

The Applicant amends claims 1, 2, 4 and 5 to better describe the invention. All amendments are fully supported by the application as filed. More specifically, the feature of a hoist formed of a series of telescopically arranged tubular sections in a semi-lubricated contact between each other can be found at paragraphs [0001], [0006], [0012], [0018]; the feature of a hoist that allows ambient air to freely enter in the hoist between a piston head and tubular section thereof is found at paragraph [0012]. Reconsideration of this Application is requested.

No new matter has been entered.

REJECTIONS UNDER 35 U.S.C. § 103, FIRST PARAGRAPH

The Examiner has rejected claims 1, 2, 4 and 5 as being unpatentable over **Neubauer** (5099748) in view of **Nottenboom** (3653302) and **Terjwin** (6337459), under 35 U.S.C. § 103, first paragraph.

Insofar as the rejection may continue to apply to amended claims 1, 2, 4 and 5, Applicant respectfully disagrees. Amended claims 1, 2, 4 and 5 are not obvious over the cited references.

The cited references considered alone or in combination do not provide a shaft formed of a series of telescopically arranged tubular sections, in a semi lubricated contact between each other, that allows ambient air to freely enter in the hoist between a piston head and tubular section thereof.

Neubauer describes a pneumatic telescopic mast comprising tubular sections 12a-12d, each having a bottom piston unit 16 (see Figure 2a), with a central air passage 39 controlled by a ball 40 under action of a probe 44, so as to move up or down successively the tubular sections under action of compressed air (passage 47). **Neubauer** does not use fluid. While **Neubauer** does include some seals, as pointed out

by the Examiner, **Neubauer** does not disclose a shaft formed of a series of telescopically arranged tubular sections, in a semi lubricated contact between each other, or any seals that separate fluid from one end of the tubular sections from ambient air on a second, opposite end of the tubular sections, as recited in Applicant's claims.

Notenboom relates to a double acting telescoping hoist that is closed at one end by the outer piston 12 and at the opposite end by a plug 31. **Notenboom's** is a closed system, like that described as part of the Background of the Invention section in Applicant's specification at paragraph [0003]. It is not open to ambient air or the atmosphere. **Notenboom** does not disclose a telescopic hoist having tubular sections, in a semi lubricated contact between each other, open to ambient air or the atmosphere at one end, as required by Applicant's pending claims. Instead, the differences between **Notenboom** and claims 1, 2, 4 and 5 have been set forth in Applicant's letter dated December 8, 2008.

Terjwin et al. relate to a multi-layered anti-coking heat resisting metal tubes required in carburization-hardening furnaces, cracking tubes of thermal decomposition furnaces, or other petrochemical thermal cracking furnace tube applications.

The Examiner has not provided a reasonable articulated line of reasoning as to why a person of skill in the art would, at the filing date of the present application, have 1) considered **Neubauer** since it addressed a problem completely unrelated to that of the present invention, and 2) considered it in combination with **Notenboom** and **Terjwin et al.**, which also fail to address any problem related to that of the present invention.

The combination of the present invention allows taking advantage of the porosity of nitrided steel, which is higher than that on the untreated steel, to create a semi-lubricated contact, while nitridation yields much higher hardness and preserves

high dimensional stability and achieve mechanical resistance of the tubes and protection from debris (see paragraphs [0003] and [0004] of the application). Prior to the present invention, using steel was problematic because of the steel to steel contact between the tubular sections, and no one had thought of such combination. This valuable invention is simply nowhere to be found in the cited references.

The Supreme Court in the recent KSR case stated that “[...] there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness” [...] *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007) (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

By contrast, in his Office Action, the Examiner states that [...] “it would have been obvious to one of ordinary skill in the art to modify Neubauer to include steel roughened or asperities surface to protect the steel while enabling the fluid to move over the surfaces.” Action page 3.

In this statement, the Examiner may be using hindsight. The problem of accumulation of debris and wear in rod seal type cylinders has traditionally been addressed by using dynamic and static seal means for sealing and wiper means for removing debris from a surface along which the dynamic seal means slidably contacts. Problems kept recurring, including contamination of the wipers, wear of the wear rings. In bore seal type cylinders, breathers are very quickly filled which results in causing air to be pushed and aspirated through the wipers installed on the piston heads, and these wipers being very rapidly damaged thereby leaving debris to contaminate the hoist. The industry knew about accumulation of debris and wear being associated with the type of wipers or breathers, the material of the wear rings. However, any form of association between improved hoist performance and wear resistance with the surface conditions of the tubular surfaces was heretofore unknown. There was no reasonable expectation of success. Other strategies for improving hoist performance and wear resistance were at play. It was surprising and completely against expectation that particular conditions of

the tubular surface themselves could lead to a marked advance in hoist performance and wear resistance.

In view of the above and foregoing, it is respectfully requested that the Examiner withdraw her rejection of claims 1, 2, 4 and 5 under 35 U.S.C. § 103, first paragraph.

The rejections of the claims are believed to have been overcome by the present amendments and remarks. From the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order, and such an action is earnestly solicited. The Examiner is invited to telephone the undersigned if she believes that the prosecution of this application would be furthered thereby.

Respectfully submitted,

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Date: August 10, 2009

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